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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/716,615	11/20/2003	Tsuyoshi Ebuchi	60188-713	6358

7590 04/21/2006
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EXAMINER

CHO, JAMES HYONCHOL

ART UNIT	PAPER NUMBER
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2819

DATE MAILED: 04/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

H.F.

Office Action Summary	Application No.	Applicant(s)	
	10/716,615	EBUCHI ET AL.	
	Examiner	Art Unit	
	James Cho	2819	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 1-20-2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 2,4,6-9,12 and 14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,10 and 11 is/are rejected.
- 7) ☒ Claim(s) 5 and 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Receipt is acknowledged of the Amendment filed January 20, 2006.

Drawings

The drawings were received on Feb 7, 2006. These drawings are approved.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3, 10-11 and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Pradhan (US PAT No. 6,781,456).

Regarding claim 1, Fig. 3 of Pradhan teaches a receiver circuit for receiving a receive signal (INP, INM) that undergoes a given number or more transitions in a given time (frequency of the signal), comprising; a processing unit (310) for processing the receive signal (310 is a Fail Safe Decision Logic and Control resolves a distinction between low frequency and DC of the signal INP and INM, i.e. processes the received signals for low frequency and DC; col. 4, lines 25-32 and col. 5, lines 25-27) and a signal detection unit (304, 306, 308) that accepts said receive signal, includes a transition number detection circuit (308) for detecting a number of transitions of a signal (detects frequency, i.e. the number of transition per second) obtained based on the

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receive signal (INP, INM) and outputs a signal (AND) for controlling an operation of the processing unit when the number of transitions detected by the transition number detection circuit is not more than a set value (when frequency is less than 200 MHz, the Fail Safe is activated; col. 5, lines 19-50).

Regarding claim 3, Fig. 3 of Pradhan teaches the receiver circuit of claim 1 wherein the receive signal is a data signal or a clock signal (intended use of a differential circuit of Fig. 3 is a data signal or a clock signal).

Regarding claim 10, Fig. 3 of Pradhan teaches the receiver circuit of claim 1 said signal detection unit (304, 306, 308) further comprising an offset buffer (306 in Fig. 4) that accepts the receive signal (INP, INM) and outputs a HIGH or LOW signal when amplitude of said receive signal is not more than a set value (col. 4, lines 32-52), wherein the HIGH or LOW signal output by the offset buffer is input to the transition number detection circuit as the signal obtained based on the receive signal (output signal, xor, of 306 is coupled to 310).

Regarding claim 11, Fig. 3 of Pradhan teaches the receiver circuit of claim 1, where the processing unit is a data processing unit (processes data from 306, 308) for processing a data signal received as the receive signal and is reset (initialized, i.e. reset when the receiver is just enabled; col. 5, lines 51-62) in accordance with the signal output by the signal detection unit.

Regarding claim 14, Fig. 3 of Pradhan teaches a receiver circuit for receiving a receive signal (INP, INM) that undergoes a given number or more transitions in a given time (frequency of the signal), comprising; an input terminal (INP and INM nodes) for receiving said receive signal, the input terminal having a terminating resistor (300 is not pull-up nor pull-down resistors) but not having pull-up and pull-down resistors; a processing unit (310) for processing the receive signal (310 is a Fail Safe Decision Logic and Control resolves a distinction between low frequency and DC of the signal INP and INM, i.e. processes the received signals for low frequency and DC; col. 4, lines 25-32 and col. 5, lines 25-27) and a signal detection unit (304, 308) that accepts said receive signal, includes a transition number detection circuit (308) for detecting a number of transitions of a signal (detects frequency, i.e. the number of transition per second) obtained based on the receive signal (INP, INM) and outputs a signal (AND) for controlling an operation of the processing unit when the number of transitions detected by the transition number detection circuit is not more than a set value (when frequency is less than 200 MHz, the Fail Safe is activated; col. 5, lines 19-50).

Allowable Subject Matter

Claims 5 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: Although Pradhan teaches a failsafe differential amplifier circuit, one of ordinary

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skill in the art would not have been motivated to modify the teaching of Pradhan to further includes, among other things, the specific of the received signal being a data signal and a clock signal received through a cable in which a plurality of transfer paths are integrated (claim 5), and the processing unit being power-down operated according to the signal output by the signal detection unit (claim 13).

Response to Arguments

Applicant's arguments filed January 20, 2006 have been fully considered but they are not persuasive.

On pages 10-11 of the amendment, the applicant argues that Pradhan fails to teach all limitations recited in independent claims and 1 and 14 and dependent claim 10. Regarding claims 1 and 14, the applicant argues that it is unreasonable for signal AND having two different roles where one is a signal processed by control 310 and another being a signal controlling the operation of control 310. However, the examiner notes the Office action mailed 9-20-2005 states that the receive signal being INP and INM that are being processed, i.e. 310 resolves a distinction between low frequency and DC of the input signals INP and INM while the output signal, AND, from frequency detector logic block controls the 310. The examiner notes that the claim 1 of the instant application does not recite the processing unit directly receiving the receive signal, but rather the claim 1 recites "a processing unit for processing the receive signal". The 310 of Pradhan processes the receive signal, INP and INM for consistent signal frequency and DC level using 308, 304 and 306. Regarding claim 10, the applicant has amended to include a limitation, "said signal detection unit" and argues that the rejection of claim

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1 would be inconsistent because of the claimed "receive signal". However, the examiner notes that the receive signal is INP and INM of Pradhan as discussed above where the 310 resolves, i.e. processes the receive signal INP and IMP for low frequency and DC level while 306 detects for low of the receive signal using offset values as discussed in col. 4, lines 43-52 and 308 detects the frequency of the receive signal INP and IMP.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

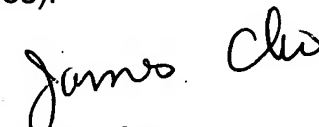
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Cho whose telephone number is 571-272-1802. The examiner can normally be reached on M-F 6:30 AM - 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rexford Barnie can be reached on 571-272-7492. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


James Cho
Primary Examiner
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